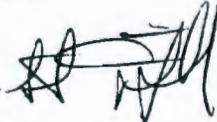


RECEIVED JULY 10, 2008

Fluor Hanford
 WSCF Analytical Lab
 P.O. Box 1000
 Richland, WA 99352
 Telephone 373-7495
 Telefax 372-0456

FLUOR**Memorandum**

To: H. Hampt E6-35 Date: M4W41-SLF-08-681
 July 9, 2008

From: S. L. Fitzgerald, Manager
 WSCF Analytical Lab 

cc: w/Attachments
 T. F. Dale S3-30 J. E. Trechter S3-30
 A. J. Kopriva S3-30 S. J. Trent E6-35
 H. K. Meznarich S3-30 File/LB
 P. D. Mix S3-30

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20081042 – SAF NUMBER F08-077

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002
 (2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following attachments for sample delivery group WSCF20081042:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)

SLF/grf

Attachments 4

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M4W41-SLF-08-681

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081042
Data Deliverable Date: 07-jul-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-077	B1TT63	W08GR01319	WATER

M4W41-SLF-08-681

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on March 22, 2008. This sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was stamped “ICED” by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 14 through 16, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 19 through 20 for QC details.

All QC controls are within the established limits.

Cyanide – The hold time requirement (14 days) for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 21 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TT54 (SDG# 20081085, SAF# F08-076) and GPAP sample B1V9X4 ((SDG#20081067).
- The RPD value for sample B1TT54 was greater than the laboratory requirement. Since the RPD value for sample B1V9X4 met the laboratory requirement and all other QC controls are with established limits, we approved the data.

Hexavalent Chromium – The hold time requirement (24 hours) for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 22 for QC details.

All QC controls are within the established limits.

ICP-AES Metals – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 23 through 27 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VHX8 (SDG# 20081117, SAF# F08-094) and sample B1VDPO (SDG#20081139, SAF# F08-039).
- We observed magnesium, potassium, sodium, and boron concentrations in the laboratory preparation blank, therefore, the results for these analytes were “C” flagged in the sample.

ICP-MS Metals – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 28 through 31 for QC details. Analytical Note(s):

- The zinc concentration in the laboratory preparation blank was slightly greater than the MDL, therefore, the result for Zinc was “C” flagged in the sample.

All QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 38 for QC details.

All QC controls are within the established limits.

Semi-VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GPP Letter of Instruction. See pages 40 through 45 for QC details.

All QC controls are within the established limits.

TPHD-WA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 39 for QC details. Analytical Note(s):

- Matrix Spike was analyzed on sample# B1V9X4 (SDG#20081067).

All QC controls are within the established limits.

VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample, were analyzed with this delivery group per the GRP Letter of Instruction. See pages 46 through 48 for QC details.

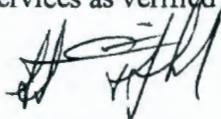
All QC controls are within the established limits.

Rad Chem – There are no hold times associated with WSCF’s radiochemical methods. A Duplicate, Matrix Spike (*Matrix Spikes apply only to Neptunium, Technetium & Tritium and Matrix Spike Duplicate applies to Neptunium*), Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 52 through 61 for QC details. Analytical Note(s):

- Rad Chem analyses requested to be performed on this sample included: Americium by AEA, Gamma Energy Analysis, Gross Alpha/Beta, Neptunium by AEA, Plutonium Isotopics by AEA, Sr-89/90, Tc-99 by ICP-MS, Tc-99 by LSC, Tritium by LSC, and Uranium Isotopics by AEA.
- TC-99 by LSC: Matrix Spike and Duplicate was analyzed on sample# B1R0W6, (SDG#20081038, SAF# F07-045).
- Neptunium by AEA: Matrix Spike was analyzed on sample# B1TT54, (SDG#20081085, SAF# F07-0) and sample# B1TT55, (SDG#20081085, SAF# F07-0).
- Tritium by LSC: The tritium recovery in the LCS did not meet the laboratory requirement. Since the tritium recovery in the MS met the laboratory requirement and all other QC controls associated with the tritium analysis are within the established limits, the data was approved.

Except as noted, all QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.



Scot L. Fitzgerald
WSCF Analytical Laboratory Manager



Andrew Kopriva
WSCF Client Services

M4W41-SLF-08-681

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 55 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical:

[Signature] S. Fitzgerald 7/9/08

Client Services:

[Signature] A. Kopriva 7/9/08

All results are reported on an "as received" basis unless otherwise noted in the comment section.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20081042
Report Date: 8-jul-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081042

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			41274	BLANK		SW-846 8270C Semi-Vols
			41274	LCS		SW-846 8270C Semi-Vols
			41274	MS	W08GR01319	SW-846 8270C Semi-Vols
			41274	MSD	W08GR01319	SW-846 8270C Semi-Vols
			41274	SAMPLE	W08GR01319	SW-846 8270C Semi-Vols
			41274	SPK-RPD	W08GR01319	SW-846 8270C Semi-Vols
			41274	SURR	W08GR01319	SW-846 8270C Semi-Vols
			41359	BLANK		NWTPH-D TPH Diesel Range (Wa)
			41359	LCS		NWTPH-D TPH Diesel Range (Wa)
			41359	MS	W08GR01319	NWTPH-D TPH Diesel Range (Wa)
			41359	MSD	W08GR01319	NWTPH-D TPH Diesel Range (Wa)
			41359	SAMPLE	W08GR01319	NWTPH-D TPH Diesel Range (Wa)
			41359	SPK-RPD	W08GR01319	NWTPH-D TPH Diesel Range (Wa)
			41359	SURR	W08GR01319	NWTPH-D TPH Diesel Range (Wa)
			41359	MS	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41687	BLANK		VOA Ground Water Protection
			41687	LCS		VOA Ground Water Protection
			41687	MS	W08GR01319	VOA Ground Water Protection
			41687	MSD	W08GR01319	VOA Ground Water Protection
			41687	SAMPLE	W08GR01319	VOA Ground Water Protection
			41687	SPK-RPD	W08GR01319	VOA Ground Water Protection
			41687	SURR	W08GR01319	VOA Ground Water Protection
36953	1	37376	41724	BLANK		Alcohols, Glycols - 8015
36953	2	37376	41724	LCS		Alcohols, Glycols - 8015
36953	4	37376	41724	DUP	W08GR01319	Alcohols, Glycols - 8015
36953	5	37376	41724	MS	W08GR01319	Alcohols, Glycols - 8015
36953	6	37376	41724	MSD	W08GR01319	Alcohols, Glycols - 8015
36953	3	37376	41724	SAMPLE	W08GR01319	Alcohols, Glycols - 8015
36953	6	37376	41724	SPK-RPD	W08GR01319	Alcohols, Glycols - 8015

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081042

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36479	1	36893	41266	BLANK		Gross Alpha/Gross Beta (AB32)
36479	2	36893	41266	LCS		Gross Alpha/Gross Beta (AB32)
36479	3	36893	41266	DUP	W08GR01319	Gross Alpha/Gross Beta (AB32)
36479	4	36893	41266	SAMPLE	W08GR01319	Gross Alpha/Gross Beta (AB32)
36507	1	36921	41284	BLANK		TC99 by Liquid Scin.
36507	4	36921	41284	LCS		TC99 by Liquid Scin.
36507	3	36921	41284	DUP	W08GR01318	TC99 by Liquid Scin.
36507	2	36921	41284	MS	W08GR01318	TC99 by Liquid Scin.
36507	7	36921	41284	SAMPLE	W08GR01319	TC99 by Liquid Scin.
36491	1	36905	41317	BLANK		Gamma Energy Analysis-grd H2O
36491	2	36905	41317	LCS		Gamma Energy Analysis-grd H2O
36491	3	36905	41317	DUP	W08GR01319	Gamma Energy Analysis-grd H2O
36491	4	36905	41317	SAMPLE	W08GR01319	Gamma Energy Analysis-grd H2O
36518	1	36932	41320	BLANK		Strontium 89/90
36518	2	36932	41320	LCS		Strontium 89/90
36518	3	36932	41320	DUP	W08GR01319	Strontium 89/90
36518	4	36932	41320	SAMPLE	W08GR01319	Strontium 89/90
36518	5	36932	41320	SURR	W08GR01319	Strontium 89/90
36645	1	37056	41391	BLANK		TC99 by ICP-200.8 MS
36645	2	37056	41391	LCS		TC99 by ICP-200.8 MS
36645	4	37056	41391	SAMPLE	W08GR01319	TC99 by ICP-200.8 MS
36873	1	37293	41646	BLANK		Tritium by Liq Sct column prep
36873	4	37293	41646	LCS		Tritium by Liq Sct column prep
36873	3	37293	41646	DUP	W08GR01319	Tritium by Liq Sct column prep
36873	2	37293	41646	MS	W08GR01319	Tritium by Liq Sct column prep
36873	5	37293	41646	SAMPLE	W08GR01319	Tritium by Liq Sct column prep
36869	1	37289	41649	BLANK		Neptunium by AEA
36869	2	37289	41649	LCS		Neptunium by AEA
36869	3	37289	41649	DUP	W08GR01319	Neptunium by AEA
36869	5	37289	41649	MS	W08GR01319	Neptunium by AEA
36869	6	37289	41649	MSD	W08GR01319	Neptunium by AEA
36869	4	37289	41649	SAMPLE	W08GR01319	Neptunium by AEA
36869	6	37289	41649	SPK-RPD	W08GR01319	Neptunium by AEA
36869	8	37289	41649	MS	W08GR01411	Neptunium by AEA
36869	10	37289	41649	MS	W08GR01412	Neptunium by AEA
36967	1	37390	41739	BLANK		Uranium Isotopics by AEA
36967	2	37390	41739	LCS		Uranium Isotopics by AEA
36967	3	37390	41739	DUP	W08GR01319	Uranium Isotopics by AEA
36967	4	37390	41739	SAMPLE	W08GR01319	Uranium Isotopics by AEA
36967	5	37390	41739	SURR	W08GR01319	Uranium Isotopics by AEA
36968	1	37391	41740	BLANK		Plutonium Isotopics by AEA
36968	2	37391	41740	LCS		Plutonium Isotopics by AEA
36968	3	37391	41740	DUP	W08GR01319	Plutonium Isotopics by AEA
36968	4	37391	41740	SAMPLE	W08GR01319	Plutonium Isotopics by AEA

36968	5	37391	41740	SURR	W08GR01319	Plutonium Isotopics by AEA
36969	1	37392	41741	BLANK		Americium by AEA
36969	2	37392	41741	LCS		Americium by AEA
36969	3	37392	41741	DUP	W08GR01319	Americium by AEA
36969	4	37392	41741	SAMPLE	W08GR01319	Americium by AEA
36969	5	37392	41741	SURR	W08GR01319	Americium by AEA

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081042

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36445	2	36860	41196	BLANK		Anions by Ion Chromatography
36445	8	36860	41196	BLANK		Anions by Ion Chromatography
36445	3	36860	41196	LCS		Anions by Ion Chromatography
36445	5	36860	41196	DUP	W08GR01319	Anions by Ion Chromatography
36445	6	36860	41196	MS	W08GR01319	Anions by Ion Chromatography
36445	7	36860	41196	MSD	W08GR01319	Anions by Ion Chromatography
36445	4	36860	41196	SAMPLE	W08GR01319	Anions by Ion Chromatography
36445	7	36860	41196	SPK-RPD	W08GR01319	Anions by Ion Chromatography
36464	2	36876	41233	BLANK		Hexavalent chromium
36464	3	36876	41233	LCS		Hexavalent chromium
36464	5	36876	41233	DUP	W08GR01319	Hexavalent chromium
36464	6	36876	41233	MS	W08GR01319	Hexavalent chromium
36464	7	36876	41233	MSD	W08GR01319	Hexavalent chromium
36464	4	36876	41233	SAMPLE	W08GR01319	Hexavalent chromium
36464	7	36876	41233	SPK-RPD	W08GR01319	Hexavalent chromium
36464	9	36876	41233	DUP	W08GR01340	Hexavalent chromium
36464	10	36876	41233	MS	W08GR01340	Hexavalent chromium
36464	11	36876	41233	MSD	W08GR01340	Hexavalent chromium
36464	11	36876	41233	SPK-RPD	W08GR01340	Hexavalent chromium
36528	1	36944	41302	BLANK		Cyanide by Midi/Spectrophotom
36528	2	36944	41302	LCS		Cyanide by Midi/Spectrophotom
36528	3	36944	41302	SAMPLE	W08GR01319	Cyanide by Midi/Spectrophotom
36528	5	36944	41302	MS	W08GR01411	Cyanide by Midi/Spectrophotom
36528	6	36944	41302	MSD	W08GR01411	Cyanide by Midi/Spectrophotom
36528	6	36944	41302	SPK-RPD	W08GR01411	Cyanide by Midi/Spectrophotom
36528	13	36944	41302	MS	W08P002592	Cyanide by Midi/Spectrophotom
36528	14	36944	41302	MSD	W08P002592	Cyanide by Midi/Spectrophotom
36528	14	36944	41302	SPK-RPD	W08P002592	Cyanide by Midi/Spectrophotom
36721	1	37138	41476	BLANK		ICP-200.8 MS All possible meta
36721	2	37138	41476	LCS		ICP-200.8 MS All possible meta
36721	4	37138	41476	MS	W08GR01319	ICP-200.8 MS All possible meta
36721	5	37138	41476	MSD	W08GR01319	ICP-200.8 MS All possible meta
36721	3	37138	41476	SAMPLE	W08GR01319	ICP-200.8 MS All possible meta
36721	5	37138	41476	SPK-RPD	W08GR01319	ICP-200.8 MS All possible meta
36745	1	37157	41565	BLANK		ICP Metals Analysis, Grd H20 P
36745	2	37157	41565	LCS		ICP Metals Analysis, Grd H20 P
36745	4	37157	41565	MS	W08GR01319	ICP Metals Analysis, Grd H20 P
36745	5	37157	41565	MSD	W08GR01319	ICP Metals Analysis, Grd H20 P
36745	3	37157	41565	SAMPLE	W08GR01319	ICP Metals Analysis, Grd H20 P
36745	5	37157	41565	SPK-RPD	W08GR01319	ICP Metals Analysis, Grd H20 P
36745	9	37157	41565	MS	W08GR01437	ICP Metals Analysis, Grd H20 P
36745	10	37157	41565	MSD	W08GR01437	ICP Metals Analysis, Grd H20 P
36745	10	37157	41565	SPK-RPD	W08GR01437	ICP Metals Analysis, Grd H20 P
36745	12	37157	41565	MS	W08GR01489	ICP Metals Analysis, Grd H20 P
36745	13	37157	41565	MSD	W08GR01489	ICP Metals Analysis, Grd H20 P
36745	13	37157	41565	SPK-RPD	W08GR01489	ICP Metals Analysis, Grd H20 P

WSCF METHOD REFERENCES REPORT

Department: Organic

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846 EPA SW-846 8000B DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS EPA SW-846 8260B VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) HEIS 8260_VOA_GCMS Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C EPA SW-846 8000B DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS EPA SW-846 8270C SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) HEIS 8270_SVOA_GCMS Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-493	NWTPH-Diesel and/or Gasoline HEIS WTPH_DIESEL (HEIS) Total Petroleum Hydrocarbons in Diesel WDOE TPHD Total Petroleum Hydrocarbons in Diesel
Organics	Organics - Alcohols, Glycols EPA SW-846 8015B Nonhalogenated Organics Using GC/FID

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 8-jul-2008
Report#: WSCF20081042
Report WGPPM/5.2

Page 1

WSCF

METHOD REFERENCES REPORT

Department: Radiochemistry

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-508-415	LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS
HEIS ALPHA_GPC	GROSS ALPHA GPC
HEIS BETA_GPC	GROSS BETA GPC
HEIS SRTOT_SEP_PRECIP_GPC	Plutonium 89/90
LA-508-421	LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER
HEIS ALPHA_LSC	A/B Liquid Scintillation
HEIS BETA_LSC	A/B Liquid Scintillation
HEIS TC99_3MDSK_LSC	TC99 by Liquid Scintillation
HEIS TRITIUM_EIE_LSC	Tritium Liquid Scintillation
LA-508-471	LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP
HEIS PUIISO_IE_PRECIP_AEA	Plutonium by Alpha Energy Analysis
HEIS RAISO_AEA	Radium-226
LA-508-481	LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE
HEIS GAMMA_GS	Gamma Emission Spectrometry

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 8-jul-2008
Report#: WSCF20081042
Report WGPPM/5.2

Page 2

WSCF

METHOD REFERENCES REPORT

Department: Inorganic

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-265-403	LA-265-403: Hexavalent Chromium analysis by Spectrophotometer EPA SW-846 7196A HEXAVALENT CHROMIUM HEIS 7196_CR6 Hexavalent Chromium
LA-505-411	LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE HEIS 6010_METALS_ICP Inductively Coupled Plasma-Atomic Emmission Spectrometry
LA-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY EPA-600/R-94-111 200.8 DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS HEIS 200.8 METALS_ICPMS Inductively Coupled Plasma - Mass Spectrometry HEIS RADISOTOPES_ICPMS Radioisotopes by ICP/MS
LA-533-410	LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY EPA-600/R-94-111 300.0 DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY HEIS 300.0_ANIONS_IC Determination of Inorganic Anions by Ion Chromatography
LA-695-402	LA-695-402: DETERMINATION OF CYANIDE BY MIDIDISTILLATION AND SPECTROPHOTOMETRIC EPA-600/4-79-020 335.2 Cyanide, Total HEIS 335.2_CYANIDE Cyanide, Total

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 8-jul-2008
Report#: WSCF20081042
Report WGPPM/5.2

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	U	< 0.0210	mg/L			1.00	0.021		05/22/08
Chloride	16887-00-6	LA-533-410	U	< 0.110	mg/L			1.00	0.11		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 9.90e-03	mg/L			1.00	9.9e-03		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	U	< 0.0360	mg/L			1.00	0.036		05/22/08
Phosphate (P) by IC	PO4-P	LA-533-410	U	< 0.0320	mg/L			1.00	0.032		05/22/08
Sulfate	14808-79-8	LA-533-410	U	< 0.0770	mg/L			1.00	0.077		05/22/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/02/08
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 2.00e-03	mg/L			1.00	2.0e-03		05/23/08
ICP Metals Analysis, Grd H2O P Prep											06/18/08
ICP Metals Analysis, Grd H2O P											
Aluminum	7429-90-5	LA-505-411	U	< 30.0	ug/L			1.00	30		06/19/08
Iron	7439-89-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		06/19/08
Magnesium	7439-95-4	LA-505-411	U	< 6.00	ug/L			1.00	6.0		06/19/08
Potassium	7440-09-7	LA-505-411	U	< 45.0	ug/L			1.00	45		06/19/08
Sodium	7440-23-5	LA-505-411	U	< 27.0	ug/L			1.00	27		06/19/08
Calcium	7440-70-2	LA-505-411	U	< 34.0	ug/L			1.00	34		06/19/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		06/19/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		06/19/08
Boron	7440-42-8	LA-505-411	C	9.20	ug/L			1.00	8.0		06/19/08
Silicon	7440-21-3	LA-505-411	U	< 38.0	ug/L			1.00	38		06/19/08
Phosphorus	7723-14-0	LA-505-411	U	< 79.0	ug/L			1.00	79		06/19/08
ICP-200.8 MS All possible meta Prep											06/16/08

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

C - The Analyte was found in the Associated Blank.(inorg)

U - Analyzed for but not detected above limiting criteria.(inorg)

U - Analyzed for but not detected above limiting criteria.(org)

* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20081042
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412		1.24	ug/L			1.00	0.100		06/16/08
Nickel	7440-02-0	LA-505-412		0.220	ug/L			1.00	0.200		06/16/08
Silver	7440-22-4	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/16/08
Antimony	7440-36-0	LA-505-412	U	< 0.300	ug/L			1.00	0.300		06/16/08
Barium	7440-39-3	LA-505-412	U	< 0.200	ug/L			1.00	0.200		06/16/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/16/08
Chromium	7440-47-3	LA-505-412	U	< 0.500	ug/L			1.00	0.500		06/16/08
Cobalt	7440-48-4	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/16/08
Copper	7440-50-8	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/16/08
Vanadium	7440-62-2	LA-505-412	U	< 0.200	ug/L			1.00	0.200		06/16/08
Zinc	7440-66-6	LA-505-412	C	3.58	ug/L			1.00	0.800		06/16/08
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/16/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/16/08
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/16/08
Arsenic	7440-38-2	LA-505-412	U	< 0.400	ug/L			1.00	0.400		06/16/08
Selenium	7782-49-2	LA-505-412	U	< 0.300	ug/L			1.00	0.300		06/16/08
Thallium	7440-28-0	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/16/08
Strontium	7440-24-8	LA-505-412		0.140	ug/L			1.00	0.100		06/16/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

C - The Analyte was found in the Associated Blank. (inorg)
 U - Analyzed for but not detected above limiting criteria. (org)

U - Analyzed for but not detected above limiting criteria.(inorg)

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2
 Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Anions by Ion Chromatography

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	<0.11		RPD			n/a	20.000	U	05/22/08
DUP	Fluoride	16984-48-8	<2.1e-2		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrite	NO2-N	<9.9e-3		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrate	NO3-N	<3.6e-2		RPD			n/a	20.000	U	05/22/08
DUP	Phosphate (P) by IC	PO4-P	<3.2e-2		RPD			n/a	20.000	U	05/22/08
DUP	Sulfate	14808-79-8	<7.7e-2		RPD			n/a	20.000	U	05/22/08
MS	Chloride	16887-00-6	1.0078	101.286	% Recov	80.000	120.000				05/22/08
MS	Fluoride	16984-48-8	0.4742	96.187	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrite	NO2-N	0.4947	100.549	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrate	NO3-N	0.4781	107.197	% Recov	80.000	120.000				05/22/08
MS	Phosphate (P) by IC	PO4-P	0.8661	90.502	% Recov	80.000	120.000				05/22/08
MS	Sulfate	14808-79-8	2.0421	104.189	% Recov	80.000	120.000				05/22/08
MSD	Chloride	16887-00-6	1.0184	102.352	% Recov	80.000	120.000				05/22/08
MSD	Fluoride	16984-48-8	0.4979	100.994	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrite	NO2-N	0.4998	101.585	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrate	NO3-N	0.4586	102.825	% Recov	80.000	120.000				05/22/08
MSD	Phosphate (P) by IC	PO4-P	0.8875	92.738	% Recov	80.000	120.000				05/22/08
MSD	Sulfate	14808-79-8	2.052	104.694	% Recov	80.000	120.000				05/22/08
SPK-RPD	Chloride	16887-00-6	102.352		RPD			1.047	20.000		05/22/08
SPK-RPD	Fluoride	16984-48-8	100.994		RPD			4.876	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	101.585		RPD			1.025	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	102.825		RPD			4.183	20.000		05/22/08
SPK-RPD	Phosphate (P) by IC	PO4-P	92.738		RPD			2.441	20.000		05/22/08
SPK-RPD	Sulfate	14808-79-8	104.694		RPD			0.484	20.000		05/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Anions by Ion Chromatography

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	05/22/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	05/22/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/22/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/22/08
LCS	Chloride	16887-00-6	204.2417	101.613	% Recov	80.000	120.000				05/22/08
LCS	Fluoride	16984-48-8	107.1566	107.587	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrite	NO2-N	100.802	101.410	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrate	NO3-N	90.7053	100.672	% Recov	80.000	120.000				05/22/08
LCS	Phosphate (P) by IC	PO4-P	192.4296	99.498	% Recov	80.000	120.000				05/22/08
LCS	Sulfate	14808-79-8	404.0186	102.025	% Recov	80.000	120.000				05/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Cyanide by Midi/Spectrophotom

Sample Date: 05/28/08
 Receive Date: 05/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01411											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	54	135.000	% Recov	75.000	125.000			•	06/02/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	97	242.500	% Recov	75.000	125.000			•	06/02/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	242.500		RPD			56.954	20.000	•	06/02/08
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	41.9	104.750	% Recov	75.000	125.000				06/02/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	41.9	104.750	% Recov	75.000	125.000				06/02/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	104.750		RPD			0.000	20.000		06/02/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	06/02/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	52.7	105.400	% Recov	85.000	115.000				06/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Hexavalent chromium

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	<0.002		RPD			n/a	15.000	U	05/23/08
MS	Hexavalent chromium	18540-29-9	0.0550	102.612	% Recov	85.000	115.000				05/23/08
MSD	Hexavalent chromium	18540-29-9	0.0563	105.037	% Recov	85.000	115.000				05/23/08
SPK-RPD	Hexavalent chromium	18540-29-9	105.037		RPD			2.336	20.000		05/23/08
Lab ID: W08GR01340											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.0628		RPD			4.075	15.000		05/23/08
MS	Hexavalent chromium	18540-29-9	0.0517	96.455	% Recov	85.000	115.000				05/23/08
MSD	Hexavalent chromium	18540-29-9	0.0505	94.216	% Recov	85.000	115.000				05/23/08
SPK-RPD	Hexavalent chromium	18540-29-9	94.216		RPD			2.349	20.000		05/23/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	05/23/08
LCS	Hexavalent chromium	18540-29-9	0.0512	101.587	% Recov	80.000	120.000				05/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Aluminum	7429-90-5	959.8	95.980	% Recov	75.000	125.000				06/19/08
MS	Boron	7440-42-8	967.4	96.740	% Recov	70.000	130.000				06/19/08
MS	Beryllium	7440-41-7	506.8	101.360	% Recov	75.000	125.000				06/19/08
MS	Calcium	7440-70-2	1014	101.400	% Recov	75.000	125.000				06/19/08
MS	Iron	7439-89-6	974.1	97.410	% Recov	75.000	125.000				06/19/08
MS	Potassium	7440-09-7	10290	102.900	% Recov	75.000	125.000				06/19/08
MS	Lithium	7439-93-2	478.3	95.660	% Recov	70.000	130.000				06/19/08
MS	Magnesium	7439-95-4	951.3	95.130	% Recov	75.000	125.000				06/19/08
MS	Sodium	7440-23-5	1005	100.500	% Recov	75.000	125.000				06/19/08
MS	Phosphorus	7723-14-0	995.3	99.530	% Recov	70.000	130.000				06/19/08
MS	Silicon	7440-21-3	950.7	95.070	% Recov	70.000	130.000				06/19/08
MSD	Aluminum	7429-90-5	948.7	94.870	% Recov	75.000	125.000				06/19/08
MSD	Boron	7440-42-8	967.2	96.720	% Recov	75.000	125.000				06/19/08
MSD	Beryllium	7440-41-7	506.6	101.320	% Recov	75.000	125.000				06/19/08
MSD	Calcium	7440-70-2	1024	102.400	% Recov	75.000	125.000				06/19/08
MSD	Iron	7439-89-6	959.7	95.970	% Recov	75.000	125.000				06/19/08
MSD	Potassium	7440-09-7	10220	102.200	% Recov	75.000	125.000				06/19/08
MSD	Lithium	7439-93-2	471.8	94.360	% Recov	75.000	125.000				06/19/08
MSD	Magnesium	7439-95-4	949.6	94.960	% Recov	75.000	125.000				06/19/08
MSD	Sodium	7440-23-5	982.1	98.210	% Recov	75.000	125.000				06/19/08
MSD	Phosphorus	7723-14-0	1020	102.000	% Recov	75.000	125.000				06/19/08
MSD	Silicon	7440-21-3	957.2	95.720	% Recov	75.000	125.000				06/19/08
SPK-RPD	Aluminum	7429-90-5	94.870		RPD			1.163	20.000		06/19/08
SPK-RPD	Boron	7440-42-8	96.720		RPD			0.021	20.000		06/19/08
SPK-RPD	Beryllium	7440-41-7	101.320		RPD			0.039	20.000		06/19/08
SPK-RPD	Calcium	7440-70-2	102.400		RPD			0.981	20.000		06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Iron	7439-89-6	95.970		RPD			1.489	20.000		06/19/08
SPK-RPD	Potassium	7440-09-7	102.200		RPD			0.683	20.000		06/19/08
SPK-RPD	Lithium	7439-93-2	94.360		RPD			1.368	20.000		06/19/08
SPK-RPD	Magnesium	7439-95-4	94.960		RPD			0.179	20.000		06/19/08
SPK-RPD	Sodium	7440-23-5	98.210		RPD			2.305	20.000		06/19/08
SPK-RPD	Phosphorus	7723-14-0	102.000		RPD			2.451	20.000		06/19/08
SPK-RPD	Silicon	7440-21-3	95.720		RPD			0.681	20.000		06/19/08

Lab ID: W08GR01437
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Aluminum	7429-90-5	983.2	98.320	% Recov	75.000	125.000				06/19/08
MS	Boron	7440-42-8	978.3	97.830	% Recov	70.000	130.000				06/19/08
MS	Beryllium	7440-41-7	507.3	101.460	% Recov	75.000	125.000				06/19/08
MS	Calcium	7440-70-2	636.8	63.680	% Recov	75.000	125.000			•	06/19/08
MS	Iron	7439-89-6	973	97.300	% Recov	75.000	125.000				06/19/08
MS	Potassium	7440-09-7	11032.3	110.323	% Recov	75.000	125.000				06/19/08
MS	Lithium	7439-93-2	499.3	99.860	% Recov	70.000	130.000				06/19/08
MS	Magnesium	7439-95-4	895.5	89.550	% Recov	75.000	125.000				06/19/08
MS	Sodium	7440-23-5	657.6	65.760	% Recov	75.000	125.000			•	06/19/08
MSD	Aluminum	7429-90-5	968.2	96.820	% Recov	75.000	125.000				06/19/08
MSD	Boron	7440-42-8	963.3	96.330	% Recov	75.000	125.000				06/19/08
MSD	Beryllium	7440-41-7	504.6	100.920	% Recov	75.000	125.000				06/19/08
MSD	Calcium	7440-70-2	484.8	48.480	% Recov	75.000	125.000			•	06/19/08
MSD	Iron	7439-89-6	955.4	95.540	% Recov	75.000	125.000				06/19/08
MSD	Potassium	7440-09-7	11002.3	110.023	% Recov	75.000	125.000				06/19/08
MSD	Lithium	7439-93-2	497.8	99.560	% Recov	75.000	125.000				06/19/08
MSD	Magnesium	7439-95-4	854.9	85.490	% Recov	75.000	125.000				06/19/08
MSD	Sodium	7440-23-5	532.6	53.260	% Recov	75.000	125.000			•	06/19/08
SPK-RPD	Aluminum	7429-90-5	96.820		RPD			1.537	20.000		06/19/08
SPK-RPD	Boron	7440-42-8	96.330		RPD			1.545	20.000		06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 06/03/08
 Receive Date: 06/03/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Beryllium	7440-41-7	100.920		RPD			0.534	20.000		06/19/08
SPK-RPD	Calcium	7440-70-2	48.480		RPD			27.104	20.000 *		06/19/08
SPK-RPD	Iron	7439-89-6	95.540		RPD			1.825	20.000		06/19/08
SPK-RPD	Potassium	7440-09-7	110.023		RPD			0.272	20.000		06/19/08
SPK-RPD	Lithium	7439-93-2	99.560		RPD			0.301	20.000		06/19/08
SPK-RPD	Magnesium	7439-95-4	85.490		RPD			4.639	20.000		06/19/08
SPK-RPD	Sodium	7440-23-5	53.260		RPD			21.005	20.000 *		06/19/08

Lab ID: W08GR01489
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Aluminum	7429-90-5	1249	124.900	% Recov	75.000	125.000				06/19/08
MS	Boron	7440-42-8	1107.5	110.750	% Recov	70.000	130.000				06/19/08
MS	Beryllium	7440-41-7	468.1	93.620	% Recov	75.000	125.000				06/19/08
MS	Calcium	7440-70-2	1370	137.000	% Recov	75.000	125.000			*	06/19/08
MS	Iron	7439-89-6	905.4	90.540	% Recov	75.000	125.000				06/19/08
MS	Potassium	7440-09-7	11752	117.520	% Recov	75.000	125.000				06/19/08
MS	Lithium	7439-93-2	455.1	91.020	% Recov	70.000	130.000				06/19/08
MS	Magnesium	7439-95-4	987	98.700	% Recov	75.000	125.000				06/19/08
MS	Sodium	7440-23-5	-2084000	-208400.000	% Recov	75.000	125.000			*	06/19/08
MS	Phosphorus	7723-14-0	4280	428.000	% Recov	70.000	130.000			*	06/19/08
MS	Silicon	7440-21-3	1101	110.100	% Recov	70.000	130.000				06/19/08
MSD	Aluminum	7429-90-5	1348	134.800	% Recov	75.000	125.000			*	06/19/08
MSD	Boron	7440-42-8	972.5	97.250	% Recov	75.000	125.000				06/19/08
MSD	Beryllium	7440-41-7	463.3	92.660	% Recov	75.000	125.000				06/19/08
MSD	Calcium	7440-70-2	1366	136.600	% Recov	75.000	125.000			*	06/19/08
MSD	Iron	7439-89-6	1073	107.300	% Recov	75.000	125.000				06/19/08
MSD	Potassium	7440-09-7	11532	115.320	% Recov	75.000	125.000				06/19/08
MSD	Lithium	7439-93-2	440.4	88.080	% Recov	75.000	125.000				06/19/08
MSD	Magnesium	7439-95-4	1047	104.700	% Recov	75.000	125.000				06/19/08
MSD	Sodium	7440-23-5	-2037000	-203700.000	% Recov	75.000	125.000			*	06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date: 06/05/08
 Receive Date: 06/05/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phosphorus	7723-14-0	3060	306.000	% Recov	75.000	125.000				06/19/08
MSD	Silicon	7440-21-3	751	75.100	% Recov	75.000	125.000				06/19/08
SPK-RPD	Aluminum	7429-90-5	134.800		RPD			7.624	20.000		06/19/08
SPK-RPD	Boron	7440-42-8	97.250		RPD			12.981	20.000		06/19/08
SPK-RPD	Beryllium	7440-41-7	92.660		RPD			1.031	20.000		06/19/08
SPK-RPD	Calcium	7440-70-2	136.600		RPD			0.292	20.000		06/19/08
SPK-RPD	Iron	7439-89-6	107.300		RPD			16.943	20.000		06/19/08
SPK-RPD	Potassium	7440-09-7	115.320		RPD			1.890	20.000		06/19/08
SPK-RPD	Lithium	7439-93-2	88.080		RPD			3.283	20.000		06/19/08
SPK-RPD	Magnesium	7439-95-4	104.700		RPD			5.900	20.000		06/19/08
SPK-RPD	Sodium	7440-23-5	-203700.000		RPD			-2.281	20.000		06/19/08
SPK-RPD	Phosphorus	7723-14-0	306.000		RPD			33.243	20.000		06/19/08
SPK-RPD	Silicon	7440-21-3	75.100		RPD			37.797	20.000		06/19/08

BATCH QC

BLANK	Aluminum	7429-90-5	<30	n/a	ug/L					U	06/19/08
BLANK	Boron	7440-42-8	17	17.000	ug/L						06/19/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	06/19/08
BLANK	Calcium	7440-70-2	<34	n/a	ug/L					U	06/19/08
BLANK	Iron	7439-89-6	<9	n/a	ug/L					U	06/19/08
BLANK	Potassium	7440-09-7	138	138.000	ug/L						06/19/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	06/19/08
BLANK	Magnesium	7439-95-4	11.2	11.200	ug/L						06/19/08
BLANK	Sodium	7440-23-5	32.4	32.400	ug/L						06/19/08
BLANK	Phosphorus	7723-14-0	<79	n/a	ug/L					U	06/19/08
BLANK	Silicon	7440-21-3	<38	n/a	ug/L					U	06/19/08
LCS	Aluminum	7429-90-5	933.3	93.330	% Recov	80.000	120.000				06/19/08
LCS	Boron	7440-42-8	978.9	97.890	% Recov	80.000	120.000				06/19/08
LCS	Beryllium	7440-41-7	506	101.200	% Recov	80.000	120.000				06/19/08
LCS	Calcium	7440-70-2	1065	106.500	% Recov	80.000	120.000				06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP Metals Analysis, Grd H2O P

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Iron	7439-89-6	958.7	95.870	% Recov	80.000	120.000				06/19/08
LCS	Potassium	7440-09-7	10150	101.500	% Recov	80.000	120.000				06/19/08
LCS	Lithium	7439-93-2	467.5	93.500	% Recov	80.000	120.000				06/19/08
LCS	Magnesium	7439-95-4	942.9	94.290	% Recov	80.000	120.000				06/19/08
LCS	Sodium	7440-23-5	1009	100.900	% Recov	80.000	120.000				06/19/08
LCS	Phosphorus	7723-14-0	1026	102.600	% Recov	80.000	120.000				06/19/08
LCS	Silicon	7440-21-3	968.7	96.870	% Recov	80.000	120.000				06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP-200.8 MS All possible meta

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Silver	7440-22-4	39.09	97.725	% Recov	70.000	130.000				06/16/08
MS	Arsenic	7440-38-2	35.63	89.075	% Recov	70.000	130.000				06/16/08
MS	Barium	7440-39-3	38.14	95.350	% Recov	70.000	130.000				06/16/08
MS	Cadmium	7440-43-9	36.58	91.450	% Recov	70.000	130.000				06/16/08
MS	Cobalt	7440-48-4	38.04	95.100	% Recov	70.000	130.000				06/16/08
MS	Chromium	7440-47-3	37.99	94.975	% Recov	70.000	130.000				06/16/08
MS	Copper	7440-50-8	37.69	94.225	% Recov	70.000	130.000				06/16/08
MS	Mercury	7439-97-6	1.97	98.500	% Recov	70.000	130.000				06/16/08
MS	Manganese	7439-96-5	38.39	95.975	% Recov	70.000	130.000				06/16/08
MS	Nickel	7440-02-0	37.63	94.075	% Recov	70.000	130.000				06/16/08
MS	Lead	7439-92-1	37.61	94.025	% Recov	70.000	130.000				06/16/08
MS	Antimony	7440-36-0	39.05	97.625	% Recov	70.000	130.000				06/16/08
MS	Selenium	7782-49-2	36.27	90.675	% Recov	70.000	130.000				06/16/08
MS	Strontium	7440-24-6	37.99	94.975	% Recov	70.000	130.000				06/16/08
MS	Thallium	7440-28-0	37.48	93.700	% Recov	70.000	130.000				06/16/08
MS	Uranium	7440-61-1	37.73	94.325	% Recov	70.000	130.000				06/16/08
MS	Vanadium	7440-62-2	37.93	94.825	% Recov	70.000	130.000				06/16/08
MS	Zinc	7440-86-6	35.08	87.700	% Recov	70.000	130.000				06/16/08
MSD	Silver	7440-22-4	38.98	97.450	% Recov	70.000	130.000				06/16/08
MSD	Arsenic	7440-38-2	34.99	87.475	% Recov	70.000	130.000				06/16/08
MSD	Barium	7440-39-3	38.24	95.600	% Recov	70.000	130.000				06/16/08
MSD	Cadmium	7440-43-9	36.56	91.400	% Recov	70.000	130.000				06/16/08
MSD	Cobalt	7440-48-4	38.04	95.100	% Recov	70.000	130.000				06/16/08
MSD	Chromium	7440-47-3	37.92	94.800	% Recov	70.000	130.000				06/16/08
MSD	Copper	7440-50-8	37.73	94.325	% Recov	70.000	130.000				06/16/08
MSD	Mercury	7439-97-6	1.99	99.500	% Recov	70.000	130.000				06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP-200.8 MS All possible meta

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Manganese	7439-96-5	38.92	97.300	% Recov	70.000	130.000				06/16/08
MSD	Nickel	7440-02-0	37.57	93.925	% Recov	70.000	130.000				06/16/08
MSD	Lead	7439-92-1	37.49	93.725	% Recov	70.000	130.000				06/16/08
MSD	Antimony	7440-36-0	38.97	97.425	% Recov	70.000	130.000				06/16/08
MSD	Selenium	7782-49-2	36.88	91.700	% Recov	70.000	130.000				06/16/08
MSD	Strontium	7440-24-6	37.81	94.525	% Recov	70.000	130.000				06/16/08
MSD	Thallium	7440-28-0	37.27	93.175	% Recov	70.000	130.000				06/16/08
MSD	Uranium	7440-61-1	38.31	95.775	% Recov	70.000	130.000				06/16/08
MSD	Vanadium	7440-62-2	37.65	94.125	% Recov	70.000	130.000				06/16/08
MSD	Zinc	7440-86-6	35.63	89.075	% Recov	70.000	130.000				06/16/08
SPK-RPD	Silver	7440-22-4	97.450		RPD			0.282	20.000		06/16/08
SPK-RPD	Arsenic	7440-38-2	87.475		RPD			1.813	20.000		06/16/08
SPK-RPD	Barium	7440-39-3	95.600		RPD			0.262	20.000		06/16/08
SPK-RPD	Cadmium	7440-43-9	91.400		RPD			0.055	20.000		06/16/08
SPK-RPD	Cobalt	7440-48-4	95.100		RPD			0.000	20.000		06/16/08
SPK-RPD	Chromium	7440-47-3	94.800		RPD			0.184	20.000		06/16/08
SPK-RPD	Copper	7440-50-8	94.325		RPD			0.106	20.000		06/16/08
SPK-RPD	Mercury	7439-97-6	99.500		RPD			1.010	20.000		06/16/08
SPK-RPD	Manganese	7439-96-5	97.300		RPD			1.371	20.000		06/16/08
SPK-RPD	Nickel	7440-02-0	93.925		RPD			0.160	20.000		06/16/08
SPK-RPD	Lead	7439-92-1	93.725		RPD			0.320	20.000		06/16/08
SPK-RPD	Antimony	7440-36-0	97.425		RPD			0.205	20.000		06/16/08
SPK-RPD	Selenium	7782-49-2	91.700		RPD			1.124	20.000		06/16/08
SPK-RPD	Strontium	7440-24-6	94.525		RPD			0.475	20.000		06/16/08
SPK-RPD	Thallium	7440-28-0	93.175		RPD			0.562	20.000		06/16/08
SPK-RPD	Uranium	7440-61-1	95.775		RPD			1.526	20.000		06/16/08
SPK-RPD	Vanadium	7440-62-2	94.125		RPD			0.741	20.000		06/16/08
SPK-RPD	Zinc	7440-86-6	89.075		RPD			1.556	20.000		06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP-200.8 MS All possible meta

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	06/16/08
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	06/16/08
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	06/16/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	06/16/08
BLANK	Cobalt	7440-48-4	<5e-2	n/a	ug/L					U	06/16/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	06/16/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	06/16/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	06/16/08
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L					U	06/16/08
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	06/16/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	06/16/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	06/16/08
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	06/16/08
BLANK	Strontium	7440-24-6	<0.1	n/a	ug/L					U	06/16/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	06/16/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	06/16/08
BLANK	Vanadium	7440-82-2	<0.2	n/a	ug/L					U	06/16/08
BLANK	Zinc	7440-66-6	1.31	1.310	ug/L						06/16/08
LCS	Silver	7440-22-4	44.4	111.000	% Recov	85.000	115.000				06/16/08
LCS	Arsenic	7440-38-2	34.98	87.450	% Recov	85.000	115.000				06/16/08
LCS	Barium	7440-39-3	43.66	109.150	% Recov	85.000	115.000				06/16/08
LCS	Cadmium	7440-43-9	36.39	90.975	% Recov	85.000	115.000				06/16/08
LCS	Cobalt	7440-48-4	38.68	96.700	% Recov	85.000	115.000				06/16/08
LCS	Chromium	7440-47-3	38.45	96.125	% Recov	85.000	115.000				06/16/08
LCS	Copper	7440-50-8	38.49	96.225	% Recov	85.000	115.000				06/16/08
LCS	Mercury	7439-97-6	2.24	112.000	% Recov	85.000	115.000				06/16/08
LCS	Manganese	7439-96-5	38.7	96.750	% Recov	85.000	115.000				06/16/08
LCS	Nickel	7440-02-0	38.43	96.075	% Recov	85.000	115.000				06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: ICP-200.8 MS All possible meta

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Lead	7439-92-1	42.62	106.550	% Recov	85.000	115.000				06/16/08
LCS	Antimony	7440-36-0	44.48	111.200	% Recov	85.000	115.000				06/16/08
LCS	Selenium	7782-49-2	42.02	105.050	% Recov	85.000	115.000				06/16/08
LCS	Strontium	7440-24-6	42.91	107.275	% Recov	80.000	120.000				06/16/08
LCS	Thallium	7440-28-0	42.38	105.950	% Recov	85.000	115.000				06/16/08
LCS	Uranium	7440-61-1	43	107.500	% Recov	85.000	115.000				06/16/08
LCS	Vanadium	7440-62-2	38.33	95.825	% Recov	85.000	115.000				06/16/08
LCS	Zinc	7440-66-6	38.58	96.450	% Recov	85.000	115.000				06/16/08

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-077

Group #: WSCF20081042
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Zinc prep blank above the MDL. "C" flag ICP-AES: High magnesium, potassium, sodium, and boron preparation blank results; "C" flag if applicable. H-3/LCS is flagged for the poor recovery. Since all the other QC checks came out fine, this batch has been approved. lmh

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Organic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											
Alcohols, Glycols - 8015											
Diethyl ether	60-29-7	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/04/08
Ethylene glycol	107-21-1	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/04/08
NWTPH-D TPH Diesel Range (Wa) Prep											
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 75.0	ug/L			1.00	75		06/03/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 75.0	ug/L			1.00	75		06/03/08
SW-846 8270C Semi-Vols Prep											
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 1.00	ug/L			1.00	1.0		05/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.40	ug/L			1.00	1.4		05/28/08
Phenol	108-95-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.20	ug/L			1.00	2.2		05/28/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Pyrene	129-00-0	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.610	ug/L			1.00	0.61		05/28/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.60	ug/L			1.00	2.6		05/28/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.50	ug/L			1.00	1.5		05/28/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
4-Nitroaniline	100-01-6	LA-523-456	U	< 1.00	ug/L			1.00	1.0		05/28/08
4-Bromophenylphenyl ether	101-55-3	LA-523-456	U	< 1.00	ug/L			1.00	1.0		05/28/08
2,4-Dimethylphenol	105-67-9	LA-523-456	U	< 0.960	ug/L			1.00	0.96		05/28/08
4-Chloroaniline	106-47-8	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

C - The Analyte was found in the Associated Blank.(inorg)

U - Analyzed for but not detected above limiting criteria.(org)

U - Analyzed for but not detected above limiting criteria(inorg)

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Organic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bis(2-chloro-1-methylethyl)eth	108-60-1	LA-523-456	U	< 1.00	ug/L			1.00	1.0		05/28/08
Bis(2-chloroethyl) ether	111-44-4	LA-523-456	U	< 0.910	ug/L			1.00	0.91		05/28/08
Bis(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.810	ug/L			1.00	0.81		05/28/08
Di-n-octylphthalate	117-84-0	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Hexachlorobenzene	118-74-1	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Anthracene	120-12-7	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Dimethyl phthalate	131-11-3	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Dibenzofuran	132-64-9	LA-523-456	U	< 2.20	ug/L			1.00	2.2		05/28/08
Benzo(ghi)perylene	191-24-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Fluoranthene	206-44-0	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Acenaphthylene	208-96-8	LA-523-456	U	< 2.30	ug/L			1.00	2.3		05/28/08
Chrysene	218-01-9	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Benzo(a)pyrene	50-32-8	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
2,4-Dinitrophenol	51-28-5	LA-523-456	U	< 2.00	ug/L			1.00	2.0		05/28/08
Dibenz[a,h]anthracene	53-70-3	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	< 1.00	ug/L			1.00	1.0		05/28/08
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	< 1.30	ug/L			1.00	1.3		05/28/08
Benzo(a)anthracene	56-55-3	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
4-Chlorophenylphenyl ether	7005-72-3	LA-523-456	U	< 1.70	ug/L			1.00	1.7		05/28/08

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Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Organic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	< 5.10	ug/L			1.00	5.1		05/28/08
Isophorone	78-59-1	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Diethylphthalate	84-66-2	LA-523-456	U	< 1.90	ug/L			1.00	1.9		05/28/08
Di-n-butylphthalate	84-74-2	LA-523-456	U	< 2.30	ug/L			1.00	2.3		05/28/08
Phenanthrene	85-01-8	LA-523-456	U	< 0.560	ug/L			1.00	0.56		05/28/08
Butylbenzylphthalate	85-88-7	LA-523-456	U	< 0.610	ug/L			1.00	0.61		05/28/08
N-Nitrosodiphenylamine	86-30-6	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Fluorene	86-73-7	LA-523-456	U	< 1.40	ug/L			1.00	1.4		05/28/08
Carbazole	86-74-8	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Hexachlorobutadiene	87-68-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		05/28/08
2-Nitroaniline	88-74-4	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Naphthalene	91-20-3	LA-523-456	U	< 2.10	ug/L			1.00	2.1		05/28/08
2-Methylnaphthalene	91-57-6	LA-523-456	U	< 3.00	ug/L			1.00	3.0		05/28/08
2-Chloronaphthalene	91-58-7	LA-523-456	U	< 3.50	ug/L			1.00	3.5		05/28/08
3,3'-Dichlorobenzidine	91-94-1	LA-523-456	U	< 0.810	ug/L			1.00	0.81		05/28/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	< 1.50	ug/L			1.00	1.5		05/28/08
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	< 0.660	ug/L			1.00	0.66		05/28/08
Nitrobenzene	98-95-3	LA-523-456	U	< 0.610	ug/L			1.00	0.61		05/28/08
3-Nitroaniline	99-09-2	LA-523-456	U	< 0.610	ug/L			1.00	0.61		05/28/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Hexachloroethane	67-72-1	LA-523-456	U	< 1.40	ug/L			1.00	1.4		05/28/08
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.510	ug/L			1.00	0.51		05/28/08

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Groundwater Remediation Program

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Organic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08

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Groundwater Remediation Program

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Organic
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/03/08
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
n-Butylbenzene	104-51-8	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/03/08

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Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Alcohols, Glycols - 8015

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	2-Bromoethanol	540-51-2	18300		RPD			3.900	25.000		06/04/08
DUP	Diethyl ether	60-29-7	<5000		RPD			n/a	25.000	U	06/04/08
DUP	Ethylene glycol	107-21-1	<5000		RPD			n/a	25.000	U	06/04/08
MS	2-Bromoethanol	540-51-2	19000	107.955	% Recov	70.000	125.000				06/04/08
MS	Diethyl ether	60-29-7	7800	109.859	% Recov	75.000	125.000				06/04/08
MS	Ethylene glycol	107-21-1	10000	90.909	% Recov	75.000	125.000				06/04/08
MSD	2-Bromoethanol	540-51-2	19500	110.795	% Recov	70.000	125.000				06/04/08
MSD	Diethyl ether	60-29-7	7500	105.634	% Recov	75.000	125.000				06/04/08
MSD	Ethylene glycol	107-21-1	9600	87.273	% Recov	75.000	125.000				06/04/08
SPK-RPD	2-Bromoethanol	540-51-2	110.795		RPD			2.597	20.000		06/04/08
SPK-RPD	Diethyl ether	60-29-7	105.634		RPD			3.921	20.000		06/04/08
SPK-RPD	Ethylene glycol	107-21-1	87.273		RPD			4.081	20.000		06/04/08
BATCH QC											
BLANK	2-Bromoethanol	540-51-2	17200	97.727	% Recov	75.000	125.000				06/04/08
BLANK	Diethyl ether	60-29-7	<5000	n/a	ug/L	0.000	10.000			U	06/04/08
BLANK	Ethylene glycol	107-21-1	<5000	n/a	ug/L	0.000	5.000			U	06/04/08
LCS	2-Bromoethanol	540-51-2	17800	101.136	% Recov	70.000	130.000				06/04/08
LCS	Diethyl ether	60-29-7	7000	98.592	% Recov	70.000	130.000				06/04/08
LCS	Ethylene glycol	107-21-1	9800	89.091	% Recov	70.000	130.000				06/04/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: NWT PH-D TPH Diesel Range (Wa)

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2649.8	106.000	% Recov	75.000	125.000				06/03/08
MSD	ortho-Terphenyl Surr	84-15-1	487.80	97.600	% Recov	70.000	130.000				06/03/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2579.8	103.000	% Recov	75.000	125.000				06/03/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	97.600		RPD			3.424	20.000		06/03/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	103.000		RPD			2.871	20.000		06/03/08
SURR	ortho-Terphenyl Surr	84-15-1	529.64	106.000	% Recov	70.000	130.000				06/03/08
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	466.46	98.000	% Recov	70.000	130.000				06/09/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 75	n/a	ug/L					U	06/03/08
BLANK	ortho-Terphenyl Surr	84-15-1	498.88	99.800	% Recov	70.000	130.000				06/03/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	n/a	ug/L					U	06/03/08
LCS	ortho-Terphenyl Surr	84-15-1	20614	103.000	% Recov	70.000	130.000				06/03/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	107120	107.000	% Recov	80.000	120.000				06/03/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: SW-846 8270C Semi-Vols

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319 BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	20.587	102.000	% Recov	50.000	120.000				05/28/08
MS	1,4-Dichlorobenzene	106-46-7	20.397	101.000	% Recov	41.000	113.000				05/28/08
MS	2,4-Dinitrotoluene	121-14-2	19.389	96.000	% Recov	65.000	109.000				05/28/08
MS	2-Fluorophenol(Surr)	367-12-4	14.840	73.500	% Recov	50.000	110.000				05/28/08
MS	Acenaphthene	83-32-9	20.762	103.000	% Recov	62.000	112.000				05/28/08
MS	4-Chloro-3-methylphenol	59-50-7	30.441	100.000	% Recov	59.000	115.000				05/28/08
MS	2-Chlorophenol	95-57-8	28.540	94.200	% Recov	69.000	111.000				05/28/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	20.965	104.000	% Recov	69.000	115.000				05/28/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	19.302	95.500	% Recov	58.000	109.000				05/28/08
MS	Phenol	108-95-2	28.126	92.800	% Recov	59.000	115.000				05/28/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	20.281	100.000	% Recov	60.000	118.000				05/28/08
MS	4-Nitrophenol	100-02-7	17.107	56.500	% Recov	32.000	130.000				05/28/08
MS	Pentachlorophenol	87-86-5	15.524	51.200	% Recov	51.000	121.000				05/28/08
MS	Phenol-d5(Surr)	4165-62-2	17.845	88.300	% Recov	59.000	116.000				05/28/08
MS	Pyrene	129-00-0	21.979	109.000	% Recov	58.000	116.000				05/28/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	16.418	81.300	% Recov	60.000	120.000				05/28/08
MS	Terphenyl-d14(Surr)	98904-43-9	22.566	112.000	% Recov	60.000	120.000				05/28/08
MSD	1,2,4-Trichlorobenzene	120-82-1	21.053	104.000	% Recov	50.000	120.000				05/28/08
MSD	1,4-Dichlorobenzene	106-46-7	20.282	100.000	% Recov	41.000	113.000				05/28/08
MSD	2,4-Dinitrotoluene	121-14-2	19.606	97.000	% Recov	65.000	109.000				05/28/08
MSD	2-Fluorophenol(Surr)	367-12-4	15.493	76.700	% Recov	50.000	110.000				05/28/08
MSD	Acenaphthene	83-32-9	21.312	105.000	% Recov	62.000	112.000				05/28/08
MSD	4-Chloro-3-methylphenol	59-50-7	30.292	100.000	% Recov	59.000	115.000				05/28/08
MSD	2-Chlorophenol	95-57-8	28.523	94.100	% Recov	69.000	111.000				05/28/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	21.698	107.000	% Recov	69.000	115.000				05/28/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	20.098	99.500	% Recov	58.000	109.000				05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: SW-846 8270C Semi-Vols

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	28.924	95.400	% Recov	59.000	115.000				05/28/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	20.376	101.000	% Recov	60.000	118.000				05/28/08
MSD	4-Nitrophenol	100-02-7	20.226	66.700	% Recov	32.000	130.000				05/28/08
MSD	Pentachlorophenol	87-86-5	17.998	59.400	% Recov	51.000	121.000				05/28/08
MSD	Phenol-d5(Surr)	4165-62-2	18.724	92.700	% Recov	59.000	118.000				05/28/08
MSD	Pyrene	129-00-0	22.027	109.000	% Recov	58.000	118.000				05/28/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	17.696	87.600	% Recov	60.000	120.000				05/28/08
MSD	Terphenyl-d14(Surr)	98904-43-9	21.773	108.000	% Recov	60.000	120.000				05/28/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	104.000		RPD			1.942	25.000		05/28/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	100.000		RPD			0.995	25.000		05/28/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	97.000		RPD			1.036	25.000		05/28/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	76.700		RPD			4.261	25.000		05/28/08
SPK-RPD	Acenaphthene	83-32-9	105.000		RPD			1.923	25.000		05/28/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	100.000		RPD			0.000	25.000		05/28/08
SPK-RPD	2-Chlorophenol	95-57-8	94.100		RPD			0.106	25.000		05/28/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	107.000		RPD			2.844	25.000		05/28/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	99.500		RPD			4.103	25.000		05/28/08
SPK-RPD	Phenol	108-95-2	95.400		RPD			2.763	16.000		05/28/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	101.000		RPD			0.995	25.000		05/28/08
SPK-RPD	4-Nitrophenol	100-02-7	66.700		RPD			16.558	25.000		05/28/08
SPK-RPD	Pentachlorophenol	87-86-5	59.400		RPD			14.828	25.000		05/28/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	92.700		RPD			4.862	25.000		05/28/08
SPK-RPD	Pyrene	129-00-0	109.000		RPD			0.000	25.000		05/28/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	87.600		RPD			7.460	25.000		05/28/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	108.000		RPD			3.636	25.000		05/28/08
SURR	2-Fluorophenol(Surr)	367-12-4	15.690	77.700	% Recov	50.000	110.000				05/28/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	19.383	95.900	% Recov	58.000	109.000				05/28/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	19.573	96.900	% Recov	60.000	118.000				05/28/08
SURR	Phenol-d5(Surr)	4165-62-2	17.340	85.800	% Recov	59.000	118.000				05/28/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	13.601	67.300	% Recov	60.000	120.000				05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: SW-846 8270C Semi-Vols

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Terphenyl-d14(Surr)	98904-43-9	23.356	116.000	% Recov	60.000	120.000				05/28/08
BATCH QC											
BLANK	1,2-Dichlorobenzene	95-50-1	< 1.5	n/a	ug/L					U	05/28/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	05/28/08
BLANK	1,3-Dichlorobenzene	541-73-1	< 1.3	n/a	ug/L					U	05/28/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	05/28/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2,4,5-Trichlorophenol	95-95-4	< 0.65	n/a	ug/L					U	05/28/08
BLANK	2,4,6-Trichlorophenol	88-08-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2,4-Dimethylphenol	105-67-9	< 0.95	n/a	ug/L					U	05/28/08
BLANK	2,6-Dinitrotoluene	806-20-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2-Chloronaphthalene	91-58-7	< 3.5	n/a	ug/L					U	05/28/08
BLANK	2-Fluorophenol(Surr)	367-12-4	13.511	67.600	% Recov	50.000	110.000				05/28/08
BLANK	2-Methylnaphthalene	91-57-6	< 3.0	n/a	ug/L					U	05/28/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2-Nitroaniline	88-74-4	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	05/28/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	05/28/08
BLANK	3-Nitroaniline	99-09-2	< 0.60	n/a	ug/L					U	05/28/08
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.0	n/a	ug/L					U	05/28/08
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.0	n/a	ug/L					U	05/28/08
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 1.7	n/a	ug/L					U	05/28/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	05/28/08
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L					U	05/28/08
BLANK	Anthracene	120-12-7	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Bis(2-chloroethyl) ether	111-44-4	< 0.90	n/a	ug/L					U	05/28/08
BLANK	Benzo(a)anthracene	56-55-3	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Benzo(b)fluoranthene	205-99-2	< 0.50	n/a	ug/L					U	05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081042
 Matrix: WATER
 Test: SW-846 8270C Semi-Vols

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Benzo(ghi)perylene	191-24-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Benzo(a)pyrene	50-32-8	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	05/28/08
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 1.0	n/a	ug/L	0.000	10.000			U	05/28/08
BLANK	Benzo(k)fluoranthene	207-08-9	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Butylbenzylphthalate	85-68-7	< 0.60	n/a	ug/L					U	05/28/08
BLANK	Carbazole	86-74-8	< 0.50	n/a	ug/L					U	05/28/08
BLANK	4-Chloroaniline	106-47-8	< 0.50	n/a	ug/L					U	05/28/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Chrysene	218-01-9	< 0.50	n/a	ug/L					U	05/28/08
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 0.80	n/a	ug/L					U	05/28/08
BLANK	Dibenz(a,h)anthracene	53-70-3	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Dibenzofuran	132-64-9	< 2.2	n/a	ug/L					U	05/28/08
BLANK	Di-n-butylphthalate	84-74-2	< 2.3	n/a	ug/L					U	05/28/08
BLANK	Diethylphthalate	84-66-2	< 1.9	n/a	ug/L					U	05/28/08
BLANK	Dimethyl phthalate	131-11-3	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2,4-Dinitrophenol	51-28-5	< 2.0	n/a	ug/L					U	05/28/08
BLANK	Di-n-octylphthalate	117-84-0	< 0.50	n/a	ug/L					U	05/28/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	05/28/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	19.140	95.700	% Recov	58.000	109.000				05/28/08
BLANK	Fluorene	86-73-7	< 1.4	n/a	ug/L					U	05/28/08
BLANK	Fluoranthene	206-44-0	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Hexachlorobenzene	118-74-1	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Hexachlorobutadiene	87-68-3	< 2.0	n/a	ug/L					U	05/28/08
BLANK	Hexachlorocyclopentadiene	77-47-4	< 5.0	n/a	ug/L					U	05/28/08
BLANK	Hexachloroethane	67-72-1	< 1.4	n/a	ug/L					U	05/28/08
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Isophorone	78-59-1	< 0.50	n/a	ug/L					U	05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: SW-846 8270C Semi-Vols

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Phenol	108-95-2	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	05/28/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	20.421	102.000	% Recov	60.000	118.000				05/28/08
BLANK	Nitrobenzene	98-95-3	< 0.60	n/a	ug/L					U	05/28/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	05/28/08
BLANK	4-Nitroaniline	100-01-6	< 1.0	n/a	ug/L					U	05/28/08
BLANK	N-Nitrosodiphenylamine	86-30-6	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	05/28/08
BLANK	Phenanthrene	85-01-8	< 0.55	n/a	ug/L					U	05/28/08
BLANK	Phenol-d5(Surr)	4165-62-2	17.568	87.800	% Recov	59.000	116.000				05/28/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	05/28/08
BLANK	Tributyl phosphate	126-73-8	< 0.50	n/a	ug/L					U	05/28/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	16.083	80.400	% Recov	60.000	120.000				05/28/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	22.056	110.000	% Recov	60.000	120.000				05/28/08
LCS	1,2,4-Trichlorobenzene	120-82-1	19.708	98.500	% Recov	46.000	107.000				05/28/08
LCS	1,4-Dichlorobenzene	106-46-7	19.436	97.200	% Recov	42.000	111.000				05/28/08
LCS	2,4-Dinitrotoluene	121-14-2	19.100	95.500	% Recov	59.000	106.000				05/28/08
LCS	2-Fluorophenol(Surr)	367-12-4	15.398	77.000	% Recov	50.000	110.000				05/28/08
LCS	Acenaphthene	83-32-9	20.193	101.000	% Recov	61.000	116.000				05/28/08
LCS	4-Chloro-3-methylphenol	59-50-7	29.980	99.900	% Recov	61.000	106.000				05/28/08
LCS	2-Chlorophenol	95-57-8	27.867	92.900	% Recov	66.000	106.000				05/28/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	20.319	102.000	% Recov	71.000	114.000				05/28/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	19.198	96.000	% Recov	58.000	109.000				05/28/08
LCS	Phenol	108-95-2	28.274	94.200	% Recov	67.000	105.000				05/28/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	19.828	99.100	% Recov	60.000	118.000				05/28/08
LCS	4-Nitrophenol	100-02-7	21.112	70.400	% Recov	32.000	118.000				05/28/08
LCS	Pentachlorophenol	87-86-5	25.092	83.600	% Recov	62.000	114.000				05/28/08
LCS	Phenol-d5(Surr)	4165-62-2	17.944	89.700	% Recov	59.000	116.000				05/28/08
LCS	Pyrene	129-00-0	21.678	108.000	% Recov	66.000	118.000				05/28/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	16.809	84.000	% Recov	60.000	120.000				05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081042
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Terphenyl-d14(Surr)	98904-43-9	22.737	114.000	% Recov	60.000	120.000				05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	25.570	102.000	% Recov	63.000	117.000				06/03/08
MS	Benzene	71-43-2	24.330	97.300	% Recov	75.000	129.000				06/03/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	54.000	108.000	% Recov	75.000	125.000				06/03/08
MS	Chlorobenzene	108-90-7	25.260	101.000	% Recov	79.000	119.000				06/03/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.620	117.000	% Recov	75.000	125.000				06/03/08
MS	Toluene-d8(Surr)	2037-26-5	51.930	104.000	% Recov	75.000	125.000				06/03/08
MS	Toluene	108-88-3	25.190	101.000	% Recov	76.000	120.000				06/03/08
MS	Trichloroethene	79-01-6	21.000	84.000	% Recov	73.000	123.000				06/03/08
MSD	1,1-Dichloroethene	75-35-4	24.190	96.800	% Recov	63.000	117.000				06/03/08
MSD	Benzene	71-43-2	24.590	98.400	% Recov	75.000	129.000				06/03/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	54.900	110.000	% Recov	75.000	125.000				06/03/08
MSD	Chlorobenzene	108-90-7	25.720	103.000	% Recov	79.000	119.000				06/03/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.070	116.000	% Recov	75.000	125.000				06/03/08
MSD	Toluene-d8(Surr)	2037-26-5	52.360	105.000	% Recov	75.000	125.000				06/03/08
MSD	Toluene	108-88-3	25.560	102.000	% Recov	76.000	120.000				06/03/08
MSD	Trichloroethene	79-01-6	21.270	85.100	% Recov	73.000	123.000				06/03/08
SPK-RPD	1,1-Dichloroethene	75-35-4	96.800		RPD			5.231	20.000		06/03/08
SPK-RPD	Benzene	71-43-2	98.400		RPD			1.124	20.000		06/03/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	110		RPD			1.835	20.000		06/03/08
SPK-RPD	Chlorobenzene	108-90-7	103.000		RPD			1.961	20.000		06/03/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	116.000		RPD			0.858	20.000		06/03/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	105.000		RPD			0.957	20.000		06/03/08
SPK-RPD	Toluene	108-88-3	102.000		RPD			0.985	20.000		06/03/08
SPK-RPD	Trichloroethene	79-01-6	85.100		RPD			1.301	20.000		06/03/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	53.170	108.000	% Recov	75.000	125.000				06/03/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.480	119.000	% Recov	75.000	125.000				06/03/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	51.910	104.000	% Recov	75.000	125.000				06/03/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	0.000	5.000			U	06/03/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	06/03/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	06/03/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	06/03/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	54.540	109.000	% Recov	75.000	125.000				06/03/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L					U	06/03/08
BLANK	n-Butylbenzene	104-51-8	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	06/03/08
BLANK	cis-1,2-Dichloroethylene	158-59-2	< 1.0	n/a	ug/L					U	06/03/08
BLANK	cis-1,3-Dichloropropene	10081-01-5	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.480	119.000	% Recov	75.000	125.000				06/03/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	06/03/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L					U	06/03/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081042
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	06/03/08
BLANK	Toluene-d8(Surr)	2037-26-5	51.560	103.000	% Recov	75.000	125.000				06/03/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	06/03/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	06/03/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	06/03/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	06/03/08
LCS	1,1-Dichloroethene	75-35-4	25.220	101.000	% Recov	75.000	125.000				06/04/08
LCS	Benzene	71-43-2	23.260	93.000	% Recov	75.000	125.000				06/04/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	53.700	107.000	% Recov	75.000	125.000				06/04/08
LCS	Chlorobenzene	108-90-7	24.810	99.200	% Recov	75.000	125.000				06/04/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.690	117.000	% Recov	75.000	125.000				06/04/08
LCS	Toluene-d8(Surr)	2037-26-5	51.370	103.000	% Recov	75.000	125.000				06/04/08
LCS	Toluene	108-88-3	23.900	95.600	% Recov	75.000	125.000				06/04/08
LCS	Trichloroethene	79-01-6	19.920	79.700	% Recov	75.000	125.000				06/04/08

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-077

Group #: WSCF20081042
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Zinc prep blank above the MDL. "C" flag ICP-AES: High magnesium, potassium, sodium, and boron preparation blank results; "C" flag if applicable. H-3/LCS is flagged for the poor recovery. Since all the other QC checks came out fine, this batch has been approved. lmh

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: BITT63

**TRENT
WSCF**

Matrix: WATER

Group #: WSCF20081042
Department: Radiochemistry
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471	U	0.0400	pCi/L	+0.0740	pCi/L	1.00	0.13		07/07/08
Am-243 tracer by AEA	AM243	LA-508-471		10.0	pCi/L			1.00	0.061		07/07/08
Gamma Energy Analysis-grd H2O											
Antimony-125	14234-35-6	LA-508-481	U	3.53	pCi/L	+10.8	pCi/L	1.00	19		05/30/08
Cobalt-60	10198-40-0	LA-508-481	U	1.75	pCi/L	+3.65	pCi/L	1.00	6.9		05/30/08
Cesium-137	10045-97-3	LA-508-481	U	-0.120	pCi/L	+1.20	pCi/L	1.00	6.9		05/30/08
Europium-152	14683-23-9	LA-508-481	U	3.16	pCi/L	+12.4	pCi/L	1.00	22		05/30/08
Europium-154	15585-10-1	LA-508-481	U	-8.15	pCi/L	+11.4	pCi/L	1.00	19		05/30/08
Europium-155	14391-16-3	LA-508-481	U	-0.752	pCi/L	+7.52	pCi/L	1.00	22		05/30/08
Gross Alpha/Gross Beta (AB32)											
Gross alpha	12587-46-1	LA-508-415	U	-0.0900	pCi/L	+0.441	pCi/L	1.00	0.87		05/29/08
Gross beta	12587-47-2	LA-508-415	U	-0.0900	pCi/L	+0.0918	pCi/L	1.00	1.7		05/29/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	0.130	pCi/L	+0.194	pCi/L	1.00	0.31		06/27/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.0280	pCi/L	+0.0403	pCi/L	1.00	0.066		07/07/08
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.0230	pCi/L	+0.0214	pCi/L	1.00	0.013		07/07/08
Pu-242 tracer by AEA	PU242	LA-508-471		16.0	pCi/L			1.00	0.013		07/07/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.990	pCi/L	+1.13	pCi/L	1.00	0.92		06/02/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		96.9	Percent			1.00	0.0		06/02/08
TC99 by ICP-200.8 MS Prep											
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412	U	< 1.00e-03	ug/L			1.00	1.0e-03		06/09/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

C - The Analyte was found in the Associated Blank.(inorg)

U - Analyzed for but not detected above limiting criteria.(org)

U - Analyzed for but not detected above limiting criteria.(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-077
Sample # W08GR01319
Client ID: B1TT63

TRENT
 WSCF

Matrix: WATER

Group #: WSCF20081042
Department: Radiochemistry
Sampled: 05/22/08
Received: 05/22/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-0.600	pCi/L	+ -3.37	pCi/L	1.00	5.9		05/29/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	0.450	pCi/L	+ -0.693	pCi/L	1.00	2.0e + 02		06/26/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.0130	pCi/L	+ -0.0153	pCi/L	1.00	0.011		07/07/08
Uranium-235	15117-96-1	LA-508-471	U	4.60e-03	pCi/L	+ -9.29e-03	pCi/L	1.00	0.012		07/07/08
Uranium-238	U-238	LA-508-471	U	8.40e-03	pCi/L	+ -0.0170	pCi/L	1.00	0.031		07/07/08
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/L			1.00	0.059		07/07/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

C - The Analyte was found in the Associated Blank.(inorg)

U - Analyzed for but not detected above limiting criteria.(org)

U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Americium by AEA

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	0.13		RPD			n/a	20.000		07/07/08
DUP	Am-243 tracer by AEA	AM243	10.01	91.080	% Recov	30.000	105.000				07/07/08
SURR	Am-243 tracer by AEA	AM243	10.01	83.700	% Recov	30.000	105.000				07/07/08
BATCH QC											
BLANK	Americium-241	14596-10-2	U3.6e-2	n/a	pCi/L	-10.000	1000.000				07/07/08
BLANK	Am-243 tracer by AEA	AM243	10.01	82.930	% Recov	30.000	105.000				07/07/08
LCS	Americium-241	14596-10-2	11.32	95.527	% Recov	80.000	120.000				07/07/08
LCS	Am-243 tracer by AEA	AM243	11.11	83.250	% Recov	30.000	105.000				07/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Gamma Energy Analysis-grd H2O

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U0.765		RPD			n/a	20.000		05/30/08
DUP	Cesium-137	10045-97-3	U1.395		RPD			n/a	20.000		05/30/08
DUP	Europium-152	14683-23-9	U1.716		RPD			n/a	20.000		05/30/08
DUP	Europium-154	15585-10-1	U-7.536		RPD			n/a	20.000		05/30/08
DUP	Europium-155	14391-16-3	U-1.405		RPD			n/a	20.000		05/30/08
DUP	Antimony-125	14234-35-6	U-9.203		RPD			n/a	20.000		05/30/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U-2.52	n/a	pCi/L	-10.000	1000.000				06/02/08
BLANK	Cesium-137	10045-97-3	U2.124	n/a	pCi/L	-10.000	1000.000				06/02/08
BLANK	Europium-152	14683-23-9	U6.826	n/a	pCi/L	-10.000	1000.000				06/02/08
BLANK	Europium-154	15585-10-1	U-6.198	n/a	pCi/L	-10.000	1000.000				06/02/08
BLANK	Europium-155	14391-16-3	U-3.957	n/a	pCi/L	-10.000	1000.000				06/02/08
BLANK	Antimony-125	14234-35-6	U-6.165	n/a	pCi/L	-10.000	1000.000				06/02/08
LCS	Cobalt-60	10198-40-0	10400	104.628	% Recov	80.000	120.000				05/30/08
LCS	Cesium-137	10045-97-3	6503	107.666	% Recov	80.000	120.000				05/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha	12587-46-1	U2.0E-03		RPD			n/a	20.000		05/29/08
DUP	Gross beta	12587-47-2	U-4.5E-01		RPD			n/a	20.000		05/29/08
BATCH QC											
BLANK	Gross alpha	12587-46-1	U-3.6E-01	n/a	pCi/L	-10.000	10.000				05/29/08
BLANK	Gross beta	12587-47-2	U-1.0	n/a	pCi/L	-10.000	10.000				05/29/08
LCS	Gross alpha	12587-46-1	41.5	107.124	% Recov	80.000	120.000				05/29/08
LCS	Gross beta	12587-47-2	125.0	111.408	% Recov	80.000	120.000				05/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Neptunium by AEA

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U4.2e-2		RPD			n/a	20.000		06/27/08
MS	Neptunium-237	13994-20-2	113	113.000	% Recov	75.000	125.000				06/27/08
MSD	Neptunium-237	13994-20-2	103	103.000	% Recov	75.000	125.000				06/27/08
SPK-RPD	Neptunium-237	13994-20-2	103.000		% RPD			9.259	20.000		06/27/08
Lab ID: W08GR01411											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	98.4	98.400	% Recov	75.000	125.000				06/27/08
Lab ID: W08GR01412											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	93.2	93.200	% Recov	75.000	125.000				06/27/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U8.8e-2	n/a	pCi/L	-10.000	1000.000				06/27/08
LCS	Neptunium-237	13994-20-2	12.48	97.921	% Recov	80.000	120.000				06/27/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Plutonium Isotopics by AEA

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U2.4e-2		RPD			n/a	20.000		07/07/08
DUP	Pu-239/240 by AEA	PU-239/240	U4.8e-3		RPD			n/a	20.000		07/07/08
DUP	Pu-242 tracer by AEA	PU242	15.59	88.030	% Recov	30.000	105.000				07/07/08
SURR	Pu-242 tracer by AEA	PU242	15.59	87.140	% Recov	30.000	105.000				07/07/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U-3.4e-2	n/a	pCi/L	-10.000	1000.000				07/07/08
BLANK	Pu-239/240 by AEA	PU-239/240	U9.7e-3	n/a	pCi/L	-10.000	1000.000				07/07/08
BLANK	Pu-242 tracer by AEA	PU242	15.59	92.020	% Recov	30.000	105.000				07/07/08
LCS	Pu-239/240 by AEA	PU-239/240	12.54	97.626	% Recov	80.000	120.000				07/07/08
LCS	Pu-242 tracer by AEA	PU242	17.3	91.180	% Recov	30.000	105.000				07/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Strontium 89/90

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	96.9	96.900	% Recov	30.000	105.000				06/02/08
DUP	Strontium-89/90	SR-RAD	U-2.3E-01		RPD			n/a	20.000		06/02/08
SURR	Sr-85 Tracer by Beta Counting	SR85	96.9	96.900	% Recov	30.000	105.000				06/02/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	101.3	101.300	% Recov	30.000	105.000				06/02/08
BLANK	Strontium-89/90	10098-97-2	U-1.3	n/a	pCi/L	-10.000	100.000				06/02/08
LCS	Sr-85 Tracer by Beta Counting	SR85	96.4	96.400	% Recov	30.000	105.000				06/02/08
LCS	Strontium-89/90	10098-97-2	149.0	106.239	% Recov	80.000	120.000				06/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: TC99 by ICP-200.8 MS

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Techneium by ICP-MS	14133-76-7	< 1e-3	n/a	ug/L					U	06/09/08
LCS	Techneium by ICP-MS	14133-76-7	0.155	108.392	% Recov	49.000	125.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: TC99 by Liquid Scin.

Sample Date: 11/15/07
 Receive Date: 11/15/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01318											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	2.8E + 03		RPD			0.000	20.000		05/29/08
MS	Tc-99 by Liquid Scin.	14133-76-7	727.4	96.697	% Recov	75.000	125.000				05/29/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-0.6	n/a	pCi/L	-10.000	10.000				05/29/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	201.5	107.124	% Recov	80.000	120.000				05/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Tritium by Liq Sct column prep

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	U-1.6E+01		RPD			n/a	20.000		06/26/08
MS	Tritium	10028-17-8	17599.55	96.171	% Recov	75.000	125.000				06/26/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-2.2E+01	n/a	pCi/L	-10.000	1000.000				06/26/08
LCS	Tritium	10028-17-8	2300.0	67.130	% Recov	80.000	120.000				06/26/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081042
 Matrix: WATER
 Test: Uranium Isotopics by AEA

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01319											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	10.27	93.630	% Recov	30.000	105.000				07/07/08
DUP	Uranium-233/234	U-233/234	U2.7e-2		RPD			n/a	20.000		07/07/08
DUP	Uranium-235	15117-96-1	U4.8e-3		RPD			n/a	20.000		07/07/08
DUP	Uranium-238	U-238	U4.4e-3		RPD			n/a	20.000		07/07/08
SURR	U-232 tracer by AEA	U232	10.27	96.910	% Recov	30.000	105.000				07/07/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.27	96.390	% Recov	30.000	105.000				07/07/08
BLANK	Uranium-233/234	13966-29-5	5.5e-2	0.055	pCi/L	-10.000	1000.000				07/07/08
BLANK	Uranium-235	15117-96-1	1.4e-2	0.014	pCi/L	-10.000	1000.000				07/07/08
BLANK	Uranium-238	24678-82-8	1.7e-2	0.017	pCi/L	-10.000	1000.000				07/07/08
LCS	U-232 tracer by AEA	U232	11.4	90.900	% Recov	30.000	105.000				07/07/08
LCS	Uranium-233/234	13966-29-5	N/A	n/a	% Recov	75.000	125.000				07/07/08
LCS	Uranium-238	24678-82-8	20.26	106.885	% Recov	80.000	120.000				07/07/08

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-077

Group #: WSCF20081042
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Zinc prep blank above the MDL. "C" flag ICP-AES: High magnesium, potassium, sodium, and boron preparation blank results; "C" flag if applicable. H-3/LCS is flagged for the poor recovery. Since all the other QC checks came out fine, this batch has been approved. lmh

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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wgppc/5.2 Report#: WSCF20081042

Report Date: 8-jul-2008

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M4W41-SLF-08-681

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 5 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. BOX 1970 S3-30, Richland, WA 99352
PHONE: (509) 373-7004/FAX: (509) 373-7134

7/7/08
File **KA**

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123514/ES10
Group#: 20081042
Project#: F08-077
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 05/22/08. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR01319	B1TT63	TRENT @2008 @AEA-32 @SR89_90 CN-02	Water @8015GPP @AB-32 @AEA-33 @GEA-GPP @SVOCGPP @TC99-30 CR+6	05/22/08 @AEA-30 @AEA-31 @GPP6010 @H3-33 @IC-3 @TPHD-WA @VOA-

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@8015GPP	Alcohols, Glycols - 8015
@AB-32	Gross Alpha/Gross Beta (AB32)
@AEA-30	Plutonium Isotopics by AEA
@AEA-31	Americium by AEA
@AEA-32	Uranium Isotopics by AEA
@AEA-33	Neptunium by AEA
@GEA-GPP	Gamma Energy Analysis-grd H2O
@GPP6010	ICP Metals Analysis, Grd H2O P
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270C Semi-Vols
@TC99-30	TC99 by Liquid Scin.
@TC99-MS	TC99 by ICP-200.8 MS
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
@VOA-GPP	VOA Ground Water Protection
CN-02	Cyanide by Midi/Spectrophotom
CR+6	Hexavalent chromium

COLLECTOR

NCO SAMPLER

WEB

27

SAMPLING LOCATION

C5856, EB-136

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

MATRIX*

A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

COMPANY CONTACT

TRENT, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

PRICE CODE

7N

DATA
TURNAROUND
45 Days / 45
Days

PROJECT DESIGNATION

200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342-Q

SAF NO.

F08-077

AIR QUALITY

FIELD LOGBOOK NO.

HNF-N-4881

ACTUAL SAMPLE DEPTH

227.5' - 230'

COA

123514ES10

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

PRESERVATION

HNO3 to pH <2 HCl to pH <2 HNO3 to pH <2 None

TYPE OF CONTAINER

P P G/P G/P G/P G/P G/P G

NO. OF CONTAINER(S)

1 1 1 1 1 2 1 1

VOLUME

1000mL 1000mL 1000mL 1000mL 1L 1L 1000mL 250mL

SAMPLE ANALYSIS

Gross Alpha; Gross Beta; Isotopic Plutonium; Isotopic Uranium; Neptunium-237; Strontium-90,90 - Total Sr; Technetium-99; Americium-241; Tritium - H3;

SAMPLE NO.

20081042

MATRIX*

B1TTG3

WATER

W086201319

SAMPLE DATE SAMPLE TIME

5-22-08 0851

X X X X X X X X

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

031394

029468

ICED

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-077-002

PAGE 2 OF 3

COLLECTOR
NCO SAMPLER

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 7N

DATA
TURNAROUND

SAMPLING LOCATION
C5856, EB-136

PROJECT DESIGNATION
200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342 - Q

SAF NO.
F08-077

AIR QUALITY

45 Days / 45
Days

ICE CHEST NO.

FIELD LOGBOOK NO. ACTUAL SAMPLE DEPTH

COA
123514E510

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

SPECIAL INSTRUCTIONS

- * * The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- ~~(1)~~VOA - 8260B (TCL); VOA - 8260B (Add-On) (1-Butanol, Trichloromonofluoromethane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene)
- ~~(2)~~Alcohols, Glycols, & Ketones - 8015 (Diethyl ether, Ethylene glycol)
- ~~(3)~~Semi-VOA - 8270B (TCL); Semi-VOA - 8270B (Add-On) (3+4 Methylphenol (cresol, m+p), Tributyl phosphate)
- ~~(4)~~TPH-DieselKerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
- ~~(5)~~ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Selenium, Strontium, Thallium, Uranium) ICP Metals - 6010B (TAL)
- ~~(6)~~Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium) ICP Metals - 6010B (Add-On) (Beryllium, Boron, Lithium, Phosphorus, Silicon) 200.8_HG - ICPMS;
- ~~(6)~~IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate)
- ~~(2)~~Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Gamma Spec - Add-on (Antimony-125)

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